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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

KRAMER, DEVON C

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,584

Applicant(s)

EHRlich ET AL.

Examiner

Devon C Kramer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 16-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 33-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2) Claims 1-15 and 33-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hutchisson et al in view of Broome and further in view of French et al.

In reference to claims 1 and 33-42, Hutchisson et al provides a braking and back-up warning system (10) for a vehicle having at least one wheel (12), the system comprising: a brake mechanism provided on the vehicle with a controller (col 7 lines 20-22) connected to the brakes; electronic structure (72) configured to perform a back-up warning function; an electronic control module (col 7 lines 14-18) connected to the control module and the electronic structure; a wheel sensing arrangement (figure 1) connected to the electronic control module, the sensing arrangement configured to sense movement of the wheel and configured to communicate information relating to that which is sensed to an electronic control module (ECU), the ECU configured to operate the electronic structure based on the information received from the sensing arrangement related to the direction of the wheel which is sensed by the wheel sensing arrangement. Please note that it is common in the industry to use pneumatic brakes on heavy trucks, such as that taught by Hutchinson.

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Hutchisson is silent to the use of a pneumatic control module connected to the ECU and lacks the wheel sensing arrangement connected to the control module by wiring.

Broome provides an electronic control module (118), which receives information from a wheel speed sensor (108) and is capable of operating a pneumatic control module (125).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the control system of Hutchisson et al with the pneumatic control module of Broome in order to provide a means to relate the wheel sensing arrangement with the brakes of a vehicle. It is known in the art to relate sensing parameters associated with a vehicles speed and motion to a brake controller.

French et al teaches the use of a wheel speed sensor which is wired to an electronic control unit. (Page 10 lines 18-19)

It would have been obvious to have provided the braking and back-up warning system of Hutchinson et al as modified by Broome with a sensor arrangement which communicates with the ECU instead of a wireless arrangement merely because a having a hard wired system is more reliable and is not subjected to the same interference as a wireless system.

In reference to claim 2, Hutchisson et al provides a braking and back-up warning system where the electronic structure comprises at least one structure for sounding an audible alarm and for lighting a lamp. (Abstract)

In reference to claim 3, Hutchisson et al provides a braking and back-up warning system where the wheel speed sensing arrangement comprises a circuit which includes at least one sensor configured to sense movement of the wheel (20), the circuit configured to provide at least one signal to the electronic control module relating to the speed of the wheel which is sensed by the circuit and provide at least one signal to the ECU relating to the direction of the wheel which is sensed by the circuit. (Col 7 lines 10-20)

In reference to claims 4 and 12, Hutchisson et al provides a braking and back-up warning system wherein the circuit comprises an integrated circuit which includes at least one sensor configured to sense movement of the wheel.

In reference to claims 5 and 13, Hutchisson et al provides a braking and back-up warning system comprising a voltage source (80), the ECU comprising a relay (S2) configured to selectively operate to connect the voltage source to the electronic structure.

In reference to claims 6 and 14, Hutchisson et al provides a braking and back-up warning system where the ECU comprises a controller which is configured to receive information from the wheel sensing arrangement relating to the speed and the direction of the wheel which is sensed by the wheel sensing arrangement. (Col 7 lines 10-20)

In reference to claims 7 and 15, Hutchisson et al provides a braking and back-up warning system further comprising a transistor (126) connected to the controller, the controller configured to actuate the transistor based on information which is received from the wheel sensing arrangement relating to the direction of the wheel which is

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sensed by the wheel sensing management, the transistor connected to the relay and configured to close the relay upon being actuated by the controller.

In reference to claims 8, 10 and 44, the examiner takes official notice that a J560 connector is an industry standard to connect electrical components. Patent number 6343844 illustrates this feature.

In reference to claim 9, Hutchisson et al provides a braking and back-up warning system further comprising a voltage source, the ECU configured to selectively connect the voltage source to the electronic structure which is configured to perform the back-up warning function, depending on the information which is received from the wheel sensing arrangement relating to the direction of the wheel which is sensed by the wheel sensing arrangement.

In reference to claims 11 and 43, Hutchisson et al provides a braking and back-up warning system (10) for a vehicle having at least one wheel, said system comprising: a brake mechanism, a control module (col. 7 lines 20-22) connected to said brake mechanism; at least one of structure for sounding an audible alarm and for lighting a lamp (abstract); an electronic control module connected to said control module and to said at least one of structure for sounding an audible alarm and for lighting said lamp; a voltage source (80) connected to said electronic control module; and a circuit which, includes at least one sensor configured to sense movement of the wheel, said circuit configured to provide at least one signal to said electronic control module relating to the speed of the wheel which is sensed by said circuit and provide at least one signal to said electronic control module relating to the direction of the wheel which is sensed by

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said circuit (col 7 lines 10-20), said circuit and said electronic control module connected together, said electronic control module configured to selectively connect said voltage source to at least one of said structure for sounding an audible alarm and for lighting said lamp, depending on the at least one signal which is received from said circuit relating to the direction of the wheel which is sensed by said circuit.

Hutchisson is silent to the use of a pneumatic control module connected to the ECU and lacks the wheel sensing arrangement connected to the control module by wiring.

Broome provides an electronic control module (118), which receives information from a wheel speed sensor (108) and is capable of operating a pneumatic control module (125).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have provided the control system of Hutchisson et al with the pneumatic control module of Broome in order to provide a means to relate the wheel sensing arrangement with the brakes of a vehicle. It is known in the art to relate sensing parameters associated with a vehicles speed and motion to a brake controller.

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It would have been obvious to have provided the braking and back-up warning system of Hutchinson et al as modified by Broome with a sensor arrangement which communicates with the ECU instead of a wireless arrangement merely because a

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having a hard wired system is more reliable and is not subjected to the same interference as a wireless system.

Response to Arguments

3) Applicant's arguments filed 3/01/04 have been fully considered but they are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

4) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devon C Kramer whose telephone number is 703-305-0839. The examiner can normally be reached on Mon-Fri 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DK

Robert A. L. Boudinot 4/16/04
PATENT EXAMINER